

Perspective on Practice

Corporate eLearning: Human Resource Development Implications for Large and Small Organizations

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ABSTRACT *This paper compares and contrasts the current attitudes towards, awareness of and take-up of eLearning in large and small organizations and outlines the implications for human resource development (HRD) professionals. An in-depth study was conducted in Ireland with a number of large multinational organizations and a number of small and medium-sized enterprises (SMEs) in the engineering, electronics, aerospace, pharmaceutical and medical device sectors. The study focused on awareness, perceptions, technology support infrastructure, current and planned involvement, most frequent and most preferred methods of delivery, benefits, barriers, the motivational factors and overall attitudes to eLearning. The comparison describes a number of similarities and a number of differences both within the large organization sector and within the SME sector and between the two sectors. Finally, the implications for HRD professionals are discussed.*

KEY WORDS: eLearning, training, education, organisation, competitiveness improvement, lean

Introduction: Lifelong Learning and eLearning

As human resource development (HRD) practices shift away from training and towards learning, the notions of lifelong learning and electronic learning (eLearning) are emerging in the HRD literature. Lifelong learning is defined by Brandsma (1997) as a continuous process of personal development for everyone, whether in work or not, encompassing formal and informal activities, and making demands upon the social structures in which learning takes place. The European Commission's 2001 communication entitled 'Making a European area of lifelong learning a reality' outlined the goals of an expanding European Union 'to be more prosperous, inclusive, tolerant and democratic' (European Commission, 2001, p. 3). Most learning – for good or for bad – takes place in everyday life and work social

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situations. In other words, most of our learning is informal learning taking place in a variety of social contexts. Consequently, unless the social systems – the families, communities and organizations – in which people live and work provide an environment for developing their potential and resourcefulness, then the lifelong learning goal cannot be achieved. In this respect the communication goes on to state that in the context of creating a culture of learning across Europe that there is a need ‘to develop learning communities, cities and regions’ (European Commission, 2001, p. 21).

Many European governments are encouraging lifelong learning; for example the UK in particular highlights the changing nature of work, the need for re-skilling as traditional industries decline and new technologies emerge, and the need for everyone to engage in ongoing learning. According to Sambrook and Stewart (2000) one of the key reasons cited for aspiring to become a learning organization is the need to cope with technological change to compete. As noted by Sambrook (2004), a key government initiative in the UK was the launch of the University for Industry (UFI) renamed ‘learndirect’, where computer-based learning materials are located in learndirect centres – public places such as libraries, local colleges and hospitals. This facilitates access to personal and work-related learning by existing and potential employees, to enhance both their attitudes to learning and their personal knowledge and skills. However, although eLearning could deliver the national lifelong learning agenda, at the European level, researchers have critically evaluated the European policy for eLearning (Attwell, 2002).

According to Sambrook (2004) electronic learning, often abbreviated to eLearning (or eLearning), can be defined as any learning activity supported by information and communication technologies (ICT). According to Blocker (2005), eLearning encompasses training, education information, communication, collaboration, knowledge management and performance management.

It must, however, also be remembered that learning is inherently complex (Stevens, 2002). One of the principal criticisms of many learning technologies, especially eLearning applications, is that they seem to be predicated on assumptions of learning that are overly simplistic (Brown *et al.*, 2004). We can refer for example to many problematic attempts at using the Web or other forms of ICT to supplant or substitute face-to-face interaction between students and peers and tutors (Brown *et al.*, 2003).

Rationale: The Importance of eLearning for Human Resource Development

As eLearning becomes more mainstream, there are a number of implications for HRD professionals. According to Blocker (2005), eLearning addresses business issues such as reducing costs, providing greater access to information and accountability for learning, and increasing employee competence and competitive agility. According to Crowley (2002), ‘Cisco maintain that eLearning can be thought of as a critical element of any enterprise workforce optimisation initiative’. However, according to Schetler (2003), HRD professionals who are trying to solve training problems with eLearning focus too much on training metrics, as opposed to accepting that between 50 and 70 per cent of what is learned on the job is unstructured and assimilated through informal contact and content. In Cheese’s (2003) Executive

Issues survey of 1,000 executives from operations in North America, Europe and Asia, four areas in which eLearning could be effectively applied are:

1. *Retention*: Research shows a remarkable correlation between training and retention. Employees who say they have access to the training that they need to be successful are more than twice as likely to expect to be with the company in two years.
2. *Employee attitudes and culture*: Those same employees with access to the right training are six times more likely to think that their firm is a 'great place to work'.
3. *Improved workforce performance*: Based on the analysis of more than 60,000 professionals, 85 per cent believed that training had resulted in at least a moderate increase in their skills or knowledge, and 53 per cent attributed a significant increase in productivity to training.
4. *Customer service*: Research studies at Ford Motor Credit and a number of other recent studies found a direct correlation between customer satisfaction scores and workforce attitudes about training and development, teamwork, workload and job satisfaction.

Finally there are a number of key differences between the implications in large and small organizations that are discussed in the following sections.

eLearning in Large and Small Organizations

There has been much published on eLearning in the corporate sector (Masie, 2001; Bonk, 2002; Garavan and O'Donnell, 2003; Sambrook, 2004; Skillsoft, 2004; Blocker, 2005) Bonk's 2002 survey received over 200 corporate respondents and was focused on web-based training practices, experiences, tool preferences, instructional approaches, assessment methods, obstacles and support structures. Some of the key findings included:

- Respondents were primarily interested in Web-based learning as it increased access to learning (86 per cent). Two-thirds of respondents noted that growth in employee skills, ability to track learner progress through a learning management system and increased job performance were key reasons for their interest.
- Most organizations were using Web-based learning as an alternative to instructor-led courses (66 per cent) or as a supplement to traditional instructor-led training courses (53 per cent). About one quarter used it as a follow-up to live instruction. One in five used the Web as the sole source for learning.
- Commercial courseware was deemed highly useful by 66 per cent of respondents and was actually used by 57 per cent of their organizations.
- The primary cultural or organizational obstacle to Web-based learning, according to the respondents, was the perception of high cost (44 per cent). Other serious cultural/organizational inhibitors to Web-based teaching and learning included instructor time to prepare courses (36 per cent), resistance to technology (33 per cent), the lack of organizational support (32 per cent), difficulty measuring ROI (27 per cent) and a lack of training on how to use the Web (25 per cent).

- Both lack of time (46 per cent) and lack of incentives (29 per cent) were key reasons cited as to why learners dropped online courses. While poorly designed courses were mentioned by 17 per cent of respondents, only 2 per cent indicated that costs inhibited course completion.

According to Blocker (2005), eLearning assists in keeping employees' skills current to help bottom-line performance and many organizations are looking to embrace eLearning as a means to ensure regulatory training.

Attitude to, awareness of and take-up of eLearning in SMEs is significantly lower than in large organizations, as outlined by Brown *et al.* (2004). Research by Tansy Webster (2002) on accessibility of training for SMEs in Ireland identified the following barriers to access: affordability (42 per cent); lack of local availability (25 per cent); too disruptive to release personnel (74 per cent). Sambrook (2004) found similar views in her study of eLearning in Welsh SMEs.

Despite research carried out on the benefits of eLearning, the take up in Europe amid SMEs is lacklustre. Slater (2002) outlines how, in order to maximize the effectiveness of their internal and informal learning processes, SMEs may first need to identify those barriers currently in place. Attwell (2003) established that technological advance has not been accompanied by improvements in the pedagogies these platforms facilitate. Also, the cost of server software applications, let alone the difficulties in installing and maintaining server-based systems, is beyond the reach of most SMEs. This leaves them the option of using CD-ROMs, which, although useful in some contexts, do not allow communication between learners, or buying off-the-shelf courses from providers operating their own platforms and servers. The limited nature of the material gives little choice or opportunity to SMEs wishing to pursue this form of learning.

Brock (2000) points out that SMEs tend to use ICT more as a tool to support organizational tasks like administration and accounting, rather than for formal, internal communications as in larger organizations. However, the size of the firm does not necessarily determine levels of ICT awareness, as very small firms can be highly IT sophisticated (Gray and Lawless, 2000, cited in Sambrook, 2004). There is evidence in Irish SMEs of increasing proficiency in e-commerce in general, with owner-managers the driving force (Barry and Milner, 2002). From a European perspective, Oberski and Palomar (2000) found that online courses for managers in SMEs are effective only if there are collaborative links between educational providers and enterprises.

Having briefly outlined existing knowledge, the next section presents our own research study.

Outline of Study and Results

There were two parts to our particular study. The first part involved an in-depth analysis of eLearning in selected Ireland-based high-technology large companies that spanned a range of sectors including: electronics, aerospace, pharmaceutical and medical devices. Sixteen individuals responsible for training in eleven organizations were interviewed. The second part of the study focused on the SME sector.

The Large Organization Survey

The survey initially established what each organization's current involvement in eLearning was and how long they had been using eLearning for. Figure 1 shows that 67 per cent of organizations have been using eLearning for some time (greater than five years). It then established their investment plans for eLearning for the next two years, as outlined in Figure 2. In excess of 90 per cent of respondents indicated that there would be further investment in eLearning. Twenty-five per cent indicated that there would be an investment in in-house development capability and 25 per cent indicated that there would be further investments in infrastructure with 40 per cent of that infrastructural investment in some form of learning management system.

The survey established departmental responsibilities for eLearning. In more than 80 per cent of cases the training and development departments were responsible for the original embedding and the fostering of eLearning within organizations. Again, in the majority of cases, eLearning was both a corporate and a local initiative.

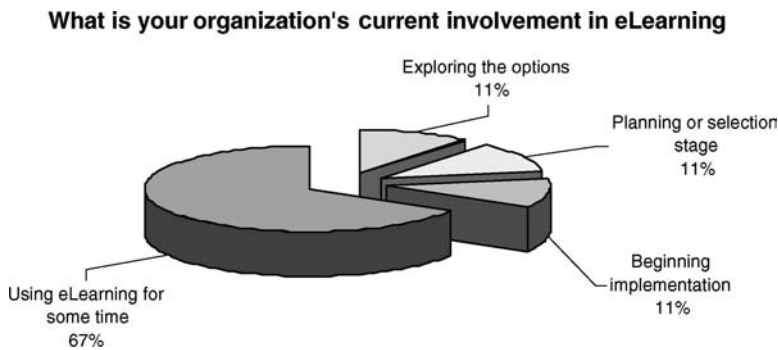


Figure 1. Organizations current involvement in eLearning

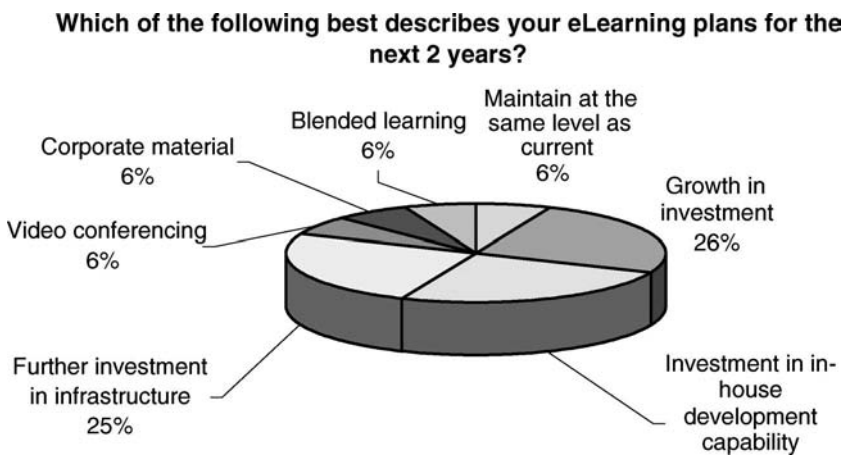


Figure 2. ELearning investment over the next two years

In most organizations training and development were responsible for the administrative and data management aspects of eLearning. The information technology departments or outside contractors were responsible for technical and technology support – often corporate information technology where the infrastructure was their responsibility. It was a mix of the business units/departments and human resources that typically determined what eLearning content was available. ELearning content was typically paid for by those business units that required it either directly or by some form of central headcount allocation to training and development, which department then paid for the eLearning content. Most organizations indicated that approximately 20 per cent of training was carried out using eLearning (up to 40 per cent in technical skills and as little as 5 per cent in soft skills) and most felt that there would be up to a 25 per cent increase in the amount of training that was planned to be undertaken using eLearning over the next two years. Personal perceptions on benefits and barriers as per a Skillsoft survey (2004) were then established, as outlined in Figures 3 and 4.

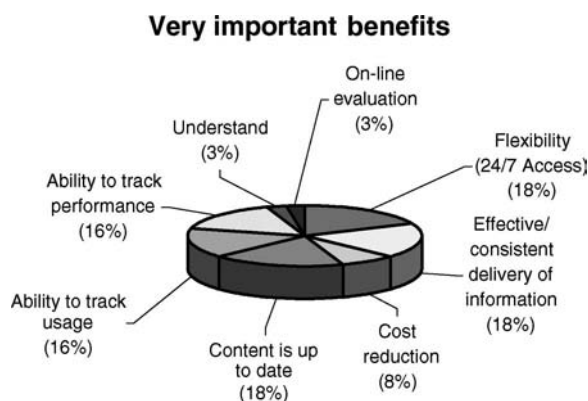


Figure 3. Benefits to eLearning

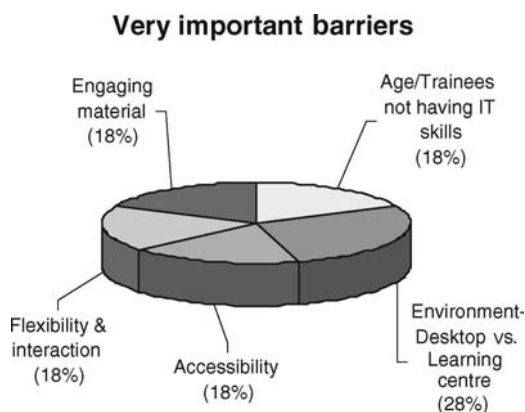


Figure 4. Barriers to eLearning

The primary benefits included flexibility (24/7 access), effective consistent delivery of information and the fact that content is up to date. The primary barrier was the delivery environment; 28 per cent felt that, due to motivational issues and interruptions, courses delivered to the desktop were not as effective as those that were undertaken at a dedicated learning centre. Another very interesting finding here was that cost reduction figured as a very important benefit to only 8 per cent of large organizations.

Motivational factors, as suggested by Masie (2001), and promotional activities that are more likely to lead employees to undertake eLearning courses were then investigated. These are outlined in Figures 5 and 6.

As a follow up to the study by Garavan and O'Donnell (2003), a series of subjective perceptions of eLearning were assessed by asking the interviewees to agree/disagree with the statements as outlined in Table 1.

There was consensus on only one point. All participants agreed that eLearning is more effective when combined with traditional forms of learning i.e. that a 'blended



Figure 5. Most important motivational factors

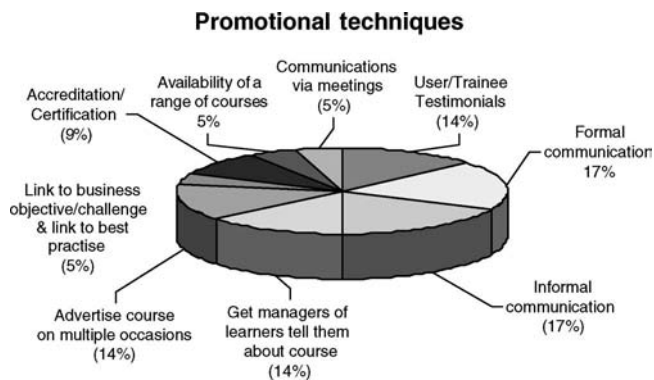


Figure 6. Most preferred and most frequently used promotional techniques

Table 1. Perceptions of eLearning

	Agree	Somewhat agree	Somewhat disagree	Disagree totally
1. eLearning demands a new attitude to learning on the parts of learners	50%	37%	13%	
2. eLearning is appropriate for training in continuous improvement skills (Lean, 6 Sigma etc.)	57%	29%	14%	
3. eLearning demands an entirely new skill set for people involved in training and development	74%	13%	13%	
4. eLearning is more effective when combined with traditional forms of learning	100%			
5. The current generation of eLearning products does not demonstrate what the future will look like	62%		25%	13%
6. eLearning is over-hyped by vendors	50%	13%	13%	24%
7. eLearning will have only a marginal effect on class-room training	13%	37%	37%	13%
8. eLearning provides the possibility of wasting a lot of money	50%	13%	37%	
9. A lot of eLearning is low on content	13%	37%	37%	13%
10. eLearning is a threat to traditional training providers		13%	25%	62%
11. eLearning is the most important development in training in our lifetime		42%	29%	29%

learning' solution is preferred. The survey then established that, if eLearning is to be an integral part of the future of training, what the key factors are and why. The main finding here was that cost reduction/benefit was identified as the single most important factor, which is significantly different from the 8 per cent that currently identified cost as a most important benefit. Figure 7 outlines the findings.

Finally, the survey established whether the organizations and the interviewees were supporters of eLearning. There was a 100 per cent positive response, i.e. in all cases both the interviewee and the organization were supporters of eLearning.

The Small and Medium-Sized Enterprise Survey

For the SME survey, 100 SMEs in five countries across Europe were surveyed, namely Ireland, UK, Sweden, Spain and Poland. The focus was on three selected sectors: component manufacturers (particularly polymers), the food sector and engineering products/sub-supply companies. These particular sectors are faced with growing and relentless competitiveness challenges from both low-cost regions and over-emphasis on low value-adding activities. Again, the focus of the SME survey was on the optimum ICT technologies to use in the delivery of training, bearing in mind the technical, financial and cultural restrictions within the general SME environment. This included pedagogical considerations, communication

technologies, network support services and on-the-job facilitation. The results given pertain only to the twenty-one companies in Ireland to facilitate comparative analysis with Irish large organizations. Figures 8 and 9 show that only 20 per cent of respondents ($n = 21$) have previously participated in internet-based learning courses but of those 50 per cent found them good and 25 per cent found them very good.

As outlined in Figure 10, the main concerns that were highlighted with eLearning courseware were:

1. Lack of immediate response to questions and trainer interactions
2. Concern about lack of personal motivation when left to do on their own.

Comparative Analysis

In terms of involvement in and experience of eLearning it is quite clear that the large organizations are significantly ahead of the small and medium enterprises. All large organization respondents had some involvement in eLearning and 67 per cent have

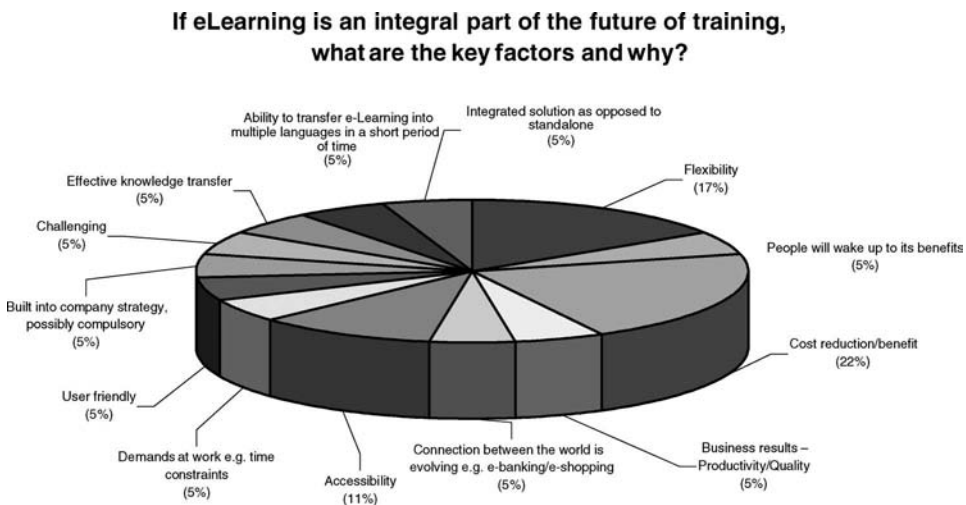


Figure 7. Key reasons why eLearning will be an integral part of the future of training

participation in courses or other educational activities which are based on learning via internet

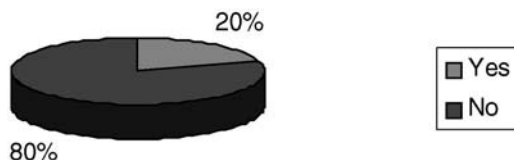


Figure 8. Participation in courses which are based on learning via internet

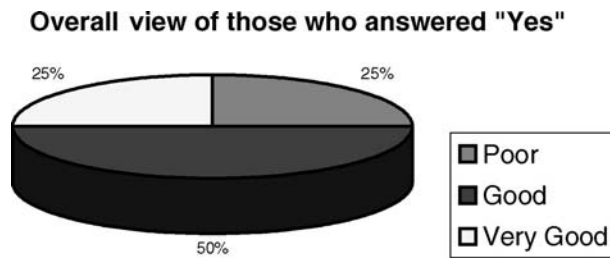


Figure 9. Overall view of those who answered 'yes'

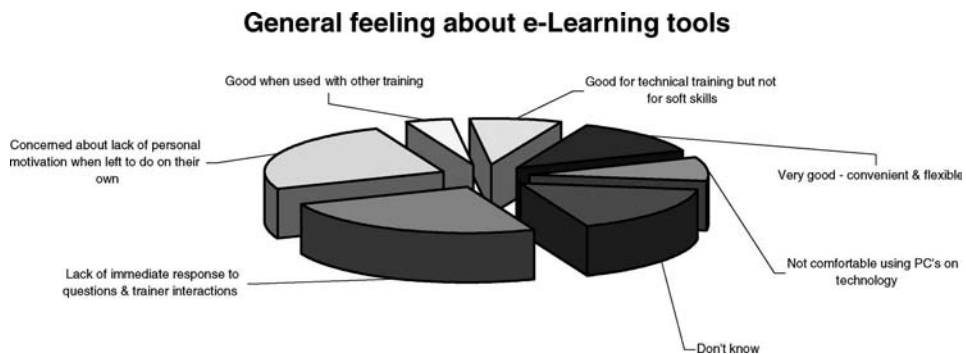


Figure 10. General feeling about eLearning tools

been using eLearning for some time (greater than five years). This compares to only 20 per cent of the SMEs that have had any involvement in eLearning. Both the large organizations and the SMEs indicated that there were a number of benefits and pitfalls to eLearning as effective learning. Both groups still considered face-to-face training as preferred in terms of effectiveness over eLearning but all agreed that eLearning would be an integral part of the future of training. The primary barrier from the large organization perspective was the delivery environment, with 28 per cent concerned that, due to motivational issues and interruptions, courses delivered to the desktop were not as effective as those that were undertaken at a dedicated learning centre. The primary barriers from the SME perspective were again the concern about lack of personal motivation when left to complete courses on their own but even more the lack of immediate response to questions and trainer interactions. Within the large organizations, there were significant differences in the responses to whether eLearning is the most important development in training in our lifetime, with 42 per cent somewhat agreeing, 29 per cent somewhat disagreeing and 29 per cent disagreeing totally. What is clear is that eLearning is here both for large and small organizations, it is here to stay, and that there are a number of HRD professionals who have not as yet accepted this. This requires a mindset change among those HRD professionals. It must also be noted that the eLearning is about exploiting the technology to enhance the learning as opposed to using the technology just because it is available.

Conclusions, Recommendations and the Implications for Human Resource Development

Experience and usage of eLearning technologies and content are significantly higher in the large organizations (usage = 67 per cent >5 years) than the SMEs (usage = 20 per cent total). Both groups agree that eLearning courses are more effective when undertaken in a dedicated learning centre as opposed to being delivered to the desktop, primarily due to a lack of motivation when people are left to undertake the course on their own. Cost is always an issue for the SME; cost is currently not the most important concern for the large organization but will be vital in the future.

The consensus among both the large organizations and the SMEs is that eLearning is more effective when combined with traditional forms of learning and that the future lay in some form of 'blended learning' solution. This has also been borne out in the literature by a number of commentators including Sloman and Reynolds (2003).

It is clear that changes in the modern workplace and in business processes raise expectations that eLearning will meet HRD needs. The primary benefit of embracing eLearning for organizations is that we can now distribute HRD programmes anywhere, any time and cost-effectively. The implications for HRD professionals is that there is a requirement to accept the use of technology for the benefit of the learner and the learning experience, as opposed to using the technology for the technology's sake, or indeed resisting the use of the technology. The most common denotation of eLearning is specifically use a small 'e' and large 'L' to indicate that the technology is there to support the learning. There is also merit in the argument that the 'e' in eLearning is not electronic learning but rather enhanced learning. This again relates back to the need for a blended solution, where there is a requirement for some traditional face-to-face contact. A key implication for a number of HRD professionals is to embrace the technology to enhance the learning experience as opposed to resisting or ignoring the technology.

Roffe (2004) argues that the emerging thinking on the applications of eLearning implies a shift in the importance of the research agenda, away from descriptions and applications of technology-based applications and towards methodologies in learner-centred approaches and critical analysis of eLearning that help the learning processes. Various questions posed by Roffe (2004) include: are the methods suited to support the learning processes? Does the eLearning approach present a strong motivation to learn? Does the learning lead to the desired results? Is the content authentic for the learner?

The research conducted as part of this study has shown that there were some significant differences but, more surprisingly, there were also a number of similarities between the large organizations and small and medium-sized enterprises and that there are a number of implications for HRD professionals.

Further research is necessary in order fully to understand eLearning issues in the large organization sector and to compare and contrast with the SME sector. The authors are currently engaged in a project that is developing and deploying blended eLearning courseware in conjunction with a number of large high-technology organizations. The material and various methodologies are also being transferred to

small and medium enterprises. It is expected that the results of this project will be available in late 2006/early 2007.

References

- Attwell, G. (2002) 'eEurope and eLearning – is European policy working', paper presented to ELSEKEK: Hellenic Association of Vocational training Centres, 1st ELSEKEK conference, Athens.
- Attwell, G. (2003) The challenge of eLearning in small enterprises: issues for policy and practice in Europe, Cedefop Panorama series 82 (Luxembourg: Office for Official Publications of the European Communities).
- Barry, H. and Milner, B. (2002) SMEs and electronic commerce: a departure from the traditional prioritisation of training? *Journal of European Industrial Training*, 26(7), pp. 316–26.
- Blocker, M. J. (2005) E-learning: an organizational necessity, White Paper. Available at: <www.rxfrohumanperformance.com> (accessed 31 January 2006).
- Bonk, C. J. (2002) *Online Training in an Online World* (Bloomington, IN: CourseShare.com). Available at: <www.CourseShare.com> (accessed 6 April 2005).
- Brandsma, J. (1997) Een leven lang leren: (on)mogelijkheden en perspectieven (lifelong learning), University of Twente, Enschede.
- Brock, J. K.-U. (2000) Information and communication technology in the small firm, in: S. Carter and D. Jones-Evans (Eds) *Enterprise and Small Business* (Harlow: Pearson Education/Financial Times; Englewood Cliffs, NJ: Prentice-Hall).
- Brown, L., Hall, T., Bannon, L., Molan, C., Hogan, D. and Murphy, E. (2003) The design and use of a blended learning solution in Irish third-level education, paper presented at EDTECH, Waterford, Ireland, May.
- Brown, L., Murphy, E., McQuade, E. and Pauli, M. (2004) Two sides to the tale: an Irish third-level blended eLearning programme and its suitability for 'lean' competitiveness training in SMEs, presented at eChallenges Conference, Vienna, October.
- Cheese, P. (2003) Lost in translation: helping learning professionals to speak the language of business benefits, *e-learning*, 4(1), p. 17.
- Crowley, R. (2002) Blueprint for an enterprise eLearning architecture, *Customer Inter@ction Solutions*, 21(4), pp. 58–61.
- European Commission (2001) Memorandum on lifelong learning. Available at: <lifelonglearning@cec.eu.int> (accessed 31 January 2006).
- Garavan, T. and O'Donnell, D. (2003) *eLearning in Irish Organisations: Survey Report* (Dublin: CIPD).
- Gray, C. and Lawless, N. (2000) Innovations in the distance development of SME management skills Available at: <www.nks.no/eurodl/shoen/Gray.html> (accessed 7 April 2005).
- Masie, E. (2001) *eLearning: If We Build It, Will They Come?* (Alexandria, VA., ASTD/The Masie Center). Available at: <http://www.masie.com/masie/researchreports/ASTD_Exec_Summ.pdf> (accessed 7 April 2005).
- Oberski, I. and Palomar, A. (2000) Evaluating online work-based education for managers in SMEs: some initial observations, *Industry and Higher Education*, 14(3), pp. 200–3.
- Roffe, I. (2004) ELearning for SMEs: competition and dimensions of perceived value, *Journal of European Industrial Training*, 28(5), pp. 440–55.
- Sambrook, S. (2004) ELearning in small organisations, in: J. Stewart and G. Beaver (Eds) *HRD in Small Organisations: Research and Practice*, HRD Research Monograph Series, pp. 185–214 (London: Routledge).
- Sambrook, S. and Stewart J. (2000) Factors influencing learning in European learning oriented organisations: issues for management, *Journal of European Industrial Training*, 24(2/3/4), pp. 209–19.
- Schetler, J. (2003) 'Cisco's Kelly: it's more than training, *Training*, 40(1), p. 16.
- Skillsoft Survey (2004) eLearning is popular and effective, *International Journal of Productivity and Performance Management*, 53(6).
- Slater, D. (2002) Practical evaluation interventions in understanding informal learning within SMEs, presented to a seminar series on Exploring Models and Partnerships for eLearning in SMEs, Stirling and Brussels, November 2002 and February 2003.

- Sloman, M. and Reynolds, J. (2003) Developing the e-learning community, *Human Resource Development International*, 6(2), pp. 259–72.
- Stevens, R. (2002) Keeping it complex in an era of big education. In: T. Koschmann, R. Hall and N. Miyake (Eds) *CSCIL2: Carrying Forward the Conversation*, pp. 269–73 (Hillsdale, NJ: Lawrence Erlbaum).
- Tansey Webster (2002) *Small Firms: The Training Imperative*, Report for Small Firms Association and Skillnets (Tansey Webster Economic Consultants).

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